Date: 07-03-2018

NC/QC/W-13/2018-19/KN-C1

## 1. TEST REPORT ON CEMENT:

**Sub**: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Construction of RCC Drains 8th and 10th cross in Kalyan nagara in Ward No. 13 Shettyhalli Sub Division}
**Ref.:** Material testing/W-13/QC/17-18,
Report Required for: Assistant Executive Engineer,
Shettyhalli Sub division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri. Umesh. N.

### PHYSICAL TESTS ON CEMENT

Brand : RAMCO
Grade * : 53,
Type * : O.P.C

**TABLE 1.1:**

| SL No | Name of Test | Test Results | Requirements as per IS 8112-1989 |
|---|---|---|---|
| 1 | Initial setting time | 175 min | Shall not be less than 30 min |
| 2 | Final setting time | 289 min | Shall not be more than 600 min |
| 3 | Fineness (by dry sieving on IS 90 micron sieve) | 1.97 % | Not to exceed 10.0% |
| 4 | Soundness test(by Le-Chatelier's method) | 2.31 mm | Shall not be more than 10 mm |
| 5 | Compressive strength a) 3 days (average of three results) | 28.46 N/Sq mm | Shall not be less than 27 N/Sqmm |

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Date: 07-03-2018

NC/QC/W-13/2018-19/KN-PCC1

## 1. TESTING OF COARSE AND FINE AGGREGATES:

**Sub**: Testing of Coarse and Fine aggregates to be used for bed concrete.
{Project*: Construction of RCC Drains 8th and 10th cross in Kalyan nagara in Ward No. 13 Shettyhalli Sub Division}

**Ref.:** Material testing/W-13/QC/17-18,

Report Required for: Assistant Executive Engineer,
Shettyhalli Sub division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Umesh. N.

### 1. COARSE AGGRGATES TABLE - SIEVE ANALYSIS:

| IS Sieve Size, mm | Percentage passing | Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing | |
|---|---|---|---|
| | 40 mm Sample | Single size | Graded |
| 40mm | 100.00 | 85-100 | 90 – 100 |
| 20mm | 63.95 | 0 -20 | 30- 70 |
| 10mm | 27.40 | 0 -5 | 10- 35 |
| 4.75mm | 2.75 | ------ | 0- 5 |

### 2. FINE AGGREGATES TABLE - SIEVE ANALYSIS:

| IS Sieve Size, mm | Percentage Passing | Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing | | | Remarks |
|---|---|---|---|---|---|
| | | Zone-I | Zone-II | Zone -III | |
| 04.75 | 100.00 | 90-100 | 90-100 | 90-100 | The Sample Conforms to Grading **Zone-II** |
| 02.36 | 98.20 | 60-95 | 75-100 | 85-100 | |
| 01.18 | 83.75 | 30-70 | 55-90 | 75-100 | |
| 600.mic | 46.90 | 15-34 | 35-59 | 60-79 | |
| 300.mic | 19.45 | 5-20 | 8-30 | 12-40 | |
| 150.mic | 6.80 | 0-10 | 0-10 | 0-10 | |

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# NEWZEN CONSULTANTS BANGALORE

NEW TECHNOLOGIES TO INNOVATE

NC/QC/W-13/2018-19/KN-C2

Date: 15-03-2018

## 1. TEST REPORT ON CEMENT:

**Sub**: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Construction of RCC Drains 8th and 10th cross in Kalyan nagara in Ward No. 13 Shettyhalli Sub Division}

**Ref.:** Material testing/W-13/QC/17-18,

Report Required for: Assistant Executive Engineer,
Shettyhalli Sub division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Umesh. N.

### PHYSICAL TESTS ON CEMENT

Brand : RAMCO
Grade * : 53,
Type * : O.P.C

**TABLE 1.1:**

| SL No | Name of Test | Test Results | Requirements as per IS 8112-1989 |
|---|---|---|---|
| 1 | Initial setting time | 171 min | Shall not be less than 30 min |
| 2 | Final setting time | 279 min | Shall not be more than 600 min |
| 3 | Fineness (by dry sieving on IS 90 micron sieve) | 1.85 % | Not to exceed 10.0% |
| 4 | Soundness test(by Le-Chatelier's method) | 2.01 mm | Shall not be more than 10 mm |
| 5 | Compressive strength<br>a) 3 days (average of three results | 28.06 N/Sq mm | Shall not be less than 27 N/Sqmm |

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NC/QC/W-13/2018-19/KN-FA1 **Date: 15-03-2018**

## 1. TESTING OF FINE AGGREGATES :

**Sub**: Testing of Fine Aggregates.

{Project*: Construction of RCC Drains 8th and 10th cross in Kalyan nagara in Ward No. 13 Shettyhalli Sub Division}

**Ref.:** Material testing/W-13/QC/17-18,

Report Required for: Assistant Executive Engineer,
Shettyhalli Sub division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Umesh. N.

**TABLE - 1.1 : SIEVE ANALYSIS :**

| IS Sieve Size,mm | Percentage Passing | Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing | | | Remarks |
|---|---|---|---|---|---|
| | | Zone-I | Zone-II | Zone -II | |
| 04.75 | **97.30** | 90-100 | 90-100 | 90-100 | The Sample Conforms to Grading **Zone-II** |
| 02.36 | **84.05** | 60-95 | 75-100 | 85-100 | |
| 01.18 | **79.60** | 30-70 | 55-90 | 75-100 | |
| 600. mic | **38.90** | 15.34 | 35-59 | 60-79 | |
| 300.mic | **15.45** | 5-20 | 8-30 | 12-40 | |
| 150.mic | **6.05** | 0-10 | 0-10 | 0-10 | |

**TABLE 1.2 ;**

| Sl No | Test Conducted | Sample | Results | **Requirements** as Per IS. Specification IS :383-1970 (Reaffirmed 2002) |
|---|---|---|---|---|
| 1 | Bulking of Sand | 001 | **17.95 %** | ----- |
| 2 | Silt Content | ---- | **0.61 %** | Not more than 8% |
| 3 | Specific Gravity | ---- | **2.61** | ------- |

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NC/QC/W-13/2018-19/KN-CA1 Date: 15-03-2018

## 1. TESTING OF COARSE AGGREGATES (20 mm):

**Sub**: Testing of Construction Materials.

{Project*: Construction of RCC Drains 8th and 10th cross in Kalyan nagara in Ward No. 13 Shettyhalli Sub Division}

**Ref.:** Material testing/W-13/QC/17-18,

Report Required for: Assistant Executive Engineer,
Shettyhalli Sub division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Umesh. N.

**Table - 1.1 : SIEVE ANALYSIS :**

| IS Sieve Size, mm | Percentage passing | Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing | |
|---|---|---|---|
| | 20 mm Sample | Single size | Graded |
| 40 mm | 100.00 | 100.00 | 100.00 |
| 20 mm | 98.05 | 85-100 | 90 - 100 |
| 10 mm | 43.20 | 0 - 20 | 25 - 55 |
| 4.75 mm | 4.10 | 0 - 5 | 0 - 10 |

**TABLE 1.2**

| SL No | Test conducted | Results | Requirements as per IS:383-1970 & Tests Conforms to IS 2386( Part I to IV) – 1963 ( Reaffirmed on 2002) |
|---|---|---|---|
| 1. | Flakiness Index | 22.95 % | Not to exceed 25 % |
| 2. | Crushing value | 26.45 % | Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces |

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**1. TEST REPORT ON REINFORCEMENT STEEL:**

**Sub**: Testing of Reinforcement Steel of diameter 10 and 12 mm **TMT Steel.**
{Project*: Construction of RCC Drains 8th and 10th cross in Kalyan nagara in Ward No. 13 Shettyhalli Sub Division}

**Ref.:** Material testing/W-13/QC/17-18,

Report Required for: Assistant Executive Engineer,
Shettyhalli Sub division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Umesh. N.

**TABLE – 1**

| SL No | Details | For 10 mm | | For 12 mm | |
|---|---|---|---|---|---|
| | | Test Results | Min Req. as per IS 1786-2008 | Test Results | Min Req. as per IS 1786-2008 |
| 01 | Observed diameter of bar | **10.0 mm** | 10.0 mm | **12.0 mm** | 12.0 mm |
| 02 | Observed Wt/m Length **Kg/m** | **0.622** | 0.567 | **0.878** | 0.834 |
| 03 | Proof stress/Yield stress, fy , **N/mm$^2$** | **546.0** | 500.0 | **552.0** | 500.0 |
| 04 | Bend/ Re bend Test | **Ok** | --- | **Ok** | --- |
| 05 | Percentage of Elongation, % | **21.80** | 12.00 | **20.90** | 12.00 |
| 06 | Ultimate Tensile Strength **N/mm$^2$** | **630.0** | 545.0 | **634.0** | 545.0 |

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